

THE SNOWY OWL MIGRATION OF 1946-47

THIRD REPORT OF THE SNOWY OWL COMMITTEE

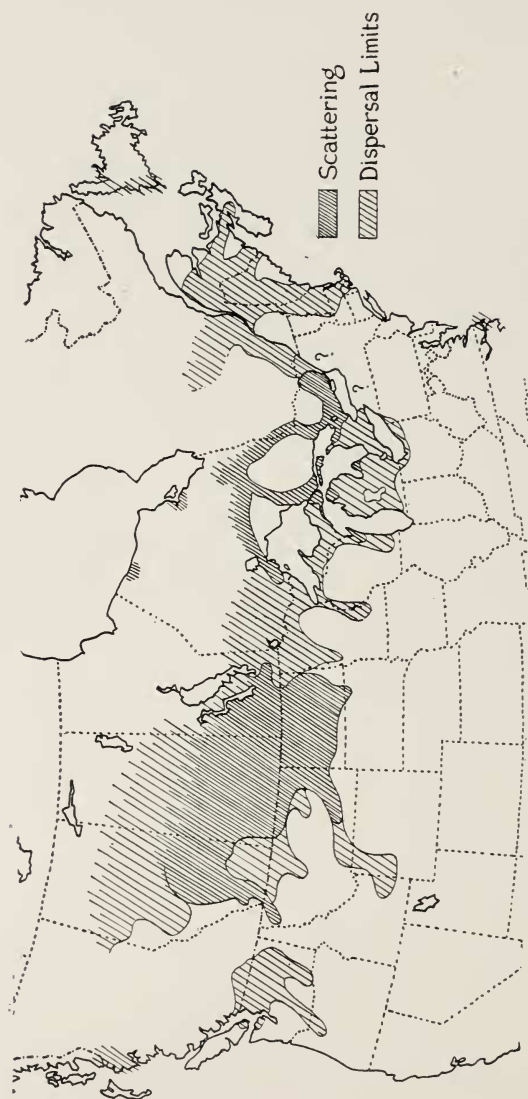
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REPORTS on two major migrations of Snowy Owls (*Nyctea scandiaca*) have been made by the Committee. The first (*Wilson Bull.*, **55**: 8-10) concerned a flight in the autumn and winter period of 1941-42. The source of this flight was the eastern Arctic and its spread largely involved southeastern Canada and the northeastern and north-central United States. Occurrences in the Prairie Provinces during the period probably represented a more or less regular winter population, not an excessive influx. Sources which provide information annually on the status of certain birds indicated an inconspicuous repetition-flight of Snowy Owls in the east during the autumn of 1942 but nothing noteworthy in the west. The minor movement in the east was considered too insignificant to warrant a full scale Committee survey and report. Presumably, the basic condition for any Snowy Owl flight in the east, or an excessive influx in the west, is an unbalance in the Arctic between the owl population and its food supply. It would therefore be expected that a repetition or "echo" flight would follow a major flight in the succeeding year if unbalance still existed. A relatively small number of owls involved in an echo flight could be accounted for either by a depletion of the owl population, or by improvement in its food supply in the Arctic, or both.

The second report of the Committee (*Wilson Bull.*, **59**: 74-78) concerned the major flight of 1945-46. Again, the source of the flight was largely the eastern Arctic, from the Boothia Peninsula eastward through Baffin Island and northern Ungava. There was some evidence of a precursory population rise of Snowy Owls on Victoria Island and at the western end of Coronation Gulf but it was not general through the western Arctic as it was in the east. The 1945-46 flight was a major one, apparently the largest on record. Its spread involved both the east and the west with heavy concentrations in suitable areas in the former region and a heavy influx and broad scattering in the latter.

The present report and map concern the flight of the following year, the autumn and winter of 1946-47. In the east this flight was a mere echo of the migration of the previous year. For example, in Ontario occurrences approximated only 13% of the volume for 1945-46, in Michigan about 7.5%, in Ohio about 2%, and in Maine and Massachusetts little more than 1%. However, scattering carried representatives as far south as North Carolina where two were observed in the Pea Island area of Dare County.

Because of the general rarity of occurrence of Snowy Owls in the east during



Extent of Snowy Owl Migration of 1946-47

the autumn-winter period of 1946-47 it has not been possible clearly to trace the course of the flight and time its progress. Therefore, it is uncertain whether the birds which appeared in the east emanated from the eastern Arctic where the population was known to be currently low, or from the western Arctic where the population was at a peak. Very few records were received from the Province of Quebec and there was but one each from New Brunswick and Nova Scotia. Of the few owls reported from Newfoundland it was suspected that some had remained over the summer from the flight of the previous year. The comparatively weak flights in other eastern Provinces and States have already been noted. The earliest observation of a Snowy Owl in Ontario was made in September at Lake Nipissing. The first reported in a more southerly locality in Ontario was observed at Toronto on October 3. In Michigan the earliest report concerned one observed in the east-central part of the state (Lapeer County). Most of the subsequent early October reports came from the western half of the Upper Peninsula. The few records from Ohio indicated a November entry there, apparently via both the east and west ends of Lake Erie. It has not been possible to obtain precise information relative to occurrences in New York State.

The situation was markedly different in the west. It should be recalled that a heavy influx occurred in the west, as in the east, the previous year. It became evident in October 1946 that another heavy flight was under way. Many observers in settled portions of the Prairie Provinces and in North Dakota considered the flight to be as large or larger than the previous year. This opinion is substantiated by census figures for the Prairie Provinces where the total of Snowy Owls reported for 1946-47 was approximately 47% higher than for 1945-46.

Because observers are rather sparsely distributed and there are unavoidable imperfections in practicable means of gathering data in the west, little more than a general impression of such a flight can be given for this vast region. Probably there were no conspicuous lines of flight or marked concentrations, scattering being the rule for ecological reasons. Although the total of owls observed, the number killed, the time of first occurrence, and the period of largest numbers for particular sections cannot be precisely presented for the west, we have the broad picture of a repetition flight the year succeeding a major flight, becoming conspicuous in central portions of the Prairie Provinces from early to mid-October. By the end of that month, forerunners occurred in North Dakota, Montana, Washington, and southern British Columbia and by early November individuals had reached northern South Dakota (Columbia), southwestern Idaho (Bingham County) and northwestern Oregon (Scio). By December the impetus of the flight was spent and the number of Snowy Owls in the northwestern tier of States was at a maximum. Relatively fewer Snowy Owls are killed in the west, than in the east.

The migration was not conspicuously evident in the midwestern and north-central United States. No Snowy Owls were reported to the Committee from Indiana, Illinois, or Iowa. Only a few were observed in Minnesota, the first at Duluth on October 5th. The first record for Wisconsin was for September in the central northern part of the State (Vilas County). Opinion in that State considers that the principal port of entry was in the northeast via the upper peninsula of Michigan from whence migrants spread south along the Lake Michigan shore, and west along the south shore of Lake Superior, thence down the Mississippi.

The general picture of density and distribution in the north-central United States suggests that Snowy Owls entered the region from the northeast, i.e. from east-central Ontario, and from west of the Great Lakes, presumably from Manitoba. It is not altogether clear whether Snowy Owls passing south through east-central Ontario came from the east or west of Hudson Bay. The largest concentration of Snowy Owls reported (approximately 100 in October) from a restricted locality was at Attawapiskat Post halfway up the west coast of James Bay. This report suggests that Snowy Owls may have followed the coast line eastward from the west side of Hudson Bay and thence southward.

Undoubtedly, the flight of 1946-47, which was pre-eminently a western event, had its origin principally in the western Arctic. Arctic stations reporting a high population of Snowy Owls for the period immediately preceding the flight are situated from Holman Island (off western Victoria Island) eastward to Repulse Bay and south through Baker Lake to Eskimo Point on the west coast of Hudson Bay. No information on the status of Snowy Owl populations in Alaska is available. The owl population was low in the eastern Arctic. Extreme southeastern occurrences of Snowy Owls during the 1946-47 flight may be interpreted as peripheral scattering of the flight from the western Arctic, or the result of a weak echo-flight of the decimated eastern Arctic population. It is evident, within the experience of this Committee, that heavy incursions in the east depend on an exodus of a peak population in the eastern Arctic. There seems no reason to suppose that any heavy periodic influx of Snowy Owls in extreme eastern North America has its origin in the western Arctic though a notable influx in the west may result from an exodus of a peak population in the eastern, or western, Arctic. Consequently, it is unlikely that a heavy flight of Snowy Owls in New England reflects conditions in animal populations west of Hudson Bay.

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